

CLEAN AIR ACT AMENDMENTS OF 1990

[Public Law 101-549; Approved on November 15, 1990]

[As amended by Public Law 104-316, Enacted October 19, 1996]

【Currency: This publication is a compilation of the text of Public Law 101-549. It was last amended by the public law listed in the As Amended Through note above and below at the bottom of each page of the pdf version and reflects current law through the date of the enactment of the public law listed at <https://www.govinfo.gov/app/collection/comps/>】

【Note: While this publication does not represent an official version of any Federal statute, substantial efforts have been made to ensure the accuracy of its contents. The official version of Federal law is found in the United States Statutes at Large and in the United States Code. The legal effect to be given to the Statutes at Large and the United States Code is established by statute (1 U.S.C. 112, 204).】

* * * * *

PART B—OTHER PROVISIONS

SEC. 231. ETHANOL SUBSTITUTE FOR DIESEL.

Within one year after the enactment of the Clean Air Act Amendments of 1990, the Administrator shall contract with a laboratory which has done research on alcohol esters of rapeseed oil to evaluate the feasibility, engine performance, emissions, and production capability associated with an alternative to diesel fuel composed of ethanol and high erucic rapeseed oil. The Administrator shall submit a report on the results of this research to Congress within 3 years of the issuance of such contract.

* * * * *

SEC. 233. STATES AUTHORITY TO REGULATE.

(a) STUDY.—The Administrator of the Environmental Protection Agency and the Secretary of Transportation, in consultation with the Secretary of Defense, shall commence a study and investigation of the testing of uninstalled aircraft engines in enclosed test cells that shall address at a minimum the following issues and such other issues as they shall deem appropriate—

- (1) whether technologies exist to control some or all emissions of oxides of nitrogen from test cells;
- (2) the effectiveness of such technologies;
- (3) the cost of implementing such technologies;
- (4) whether such technologies affect the safety, design, structure, operation, or performance of aircraft engines;
- (5) whether such technologies impair the effectiveness and accuracy of aircraft engine safety design, and performance tests conducted in test cells; and

(6) the impact of not controlling such oxides of nitrogen in the applicable nonattainment areas and on other sources, stationary and mobile, on oxides of nitrogen in such areas.

(b) REPORT, AUTHORITY TO REGULATE.—Not later than 24 months after enactment of the Clean Air Act Amendments of 1990, the Administrator of the Environmental Protection Agency and the Secretary of Transportation shall submit to Congress a report of the study conducted under this section. Following the completion of such study, any of the States may adopt or enforce any standard for emissions of oxides of nitrogen from test cells only after issuing a public notice stating whether such standards are in accordance with the findings of the study.

SEC. 234. FUGITIVE DUST.

(a) Prior to any use of the Industrial Source Complex (ISC) Model using AP-42 Compilation of Air Pollutant Emission Factors to determine the effect on air quality of fugitive particulate emissions from surface coal mines, for purposes of new source review or for purposes of demonstrating compliance with national ambient air quality standards for particulate matter applicable to periods of 24 hours or less, under section 110 or parts C or D of title I of the Clean Air Act, the Administrator shall analyze the accuracy of such model and emission factors and make revisions as may be necessary to eliminate any significant over-prediction of air quality effect of fugitive particulate emissions from such sources. Such revisions shall be completed not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990. Until such time as the Administrator develops a revised model for surface mine fugitive emissions, the State may use alternative empirical based modeling approaches pursuant to guidelines issued by the Administrator.”.

* * * * *

SEC. 303. RISK ASSESSMENT AND MANAGEMENT COMMISSION.

(a) ESTABLISHMENT.—There is hereby established a Risk Assessment and Management Commission (hereafter referred to in this section as the “Commission”), which shall commence proceedings not later than 18 months after the date of enactment of the Clean Air Act Amendments of 1990 and which shall make a full investigation of the policy implications and appropriate uses of risk assessment and risk management in regulatory programs under various Federal laws to prevent cancer and other chronic human health effects which may result from exposure to hazardous substances.

(b) CHARGE.—The Commission shall consider—

(1) the report of the National Academy of Sciences authorized by section 112(o) of the Clean Air Act, the use and limitations of risk assessment in establishing emission or effluent standards, ambient standards, exposure standards, acceptable concentration levels, tolerances or other environmental criteria for hazardous substances that present a risk of carcinogenic effects or other chronic health effects and the suitability of risk assessment for such purposes;

(2) the most appropriate methods for measuring and describing cancer risks or risks of other chronic health effects from exposure to hazardous substances considering such alternative approaches as the lifetime risk of cancer or other effects to the individual or individuals most exposed to emissions from a source or sources on both an actual and worst case basis, the range of such risks, the total number of health effects avoided by exposure reductions, effluent standards, ambient standards, exposures standards, acceptable concentration levels, tolerances and other environmental criteria, reductions in the number of persons exposed at various levels of risk, the incidence of cancer, and other public health factors;

(3) methods to reflect uncertainties in measurement and estimation techniques, the existence of synergistic or antagonistic effects among hazardous substances, the accuracy of extrapolating human health risks from animal exposure data, and the existence of unquantified direct or indirect effects on human health in risk assessment studies;

(4) risk management policy issues including the use of lifetime cancer risks to individuals most exposed, incidence of cancer, the cost and technical feasibility of exposure reduction measures and the use of site-specific actual exposure information in setting emissions standards and other limitations applicable to sources of exposure to hazardous substances; and

(5) and comment on the degree to which it is possible or desirable to develop a consistent risk assessment methodology, or a consistent standard of acceptable risk, among various Federal programs.

(c) **MEMBERSHIP.**—Such Commission shall be composed of ten members who shall have knowledge or experience in fields of risk assessment or risk management, including three members to be appointed by the President, two members to be appointed by the Speaker of the House of Representatives, one member to be appointed by the Minority Leader of the House of Representatives, two members to be appointed by the Majority Leader of the Senate, one member to be appointed by the Minority Leader of the Senate, and one member to be appointed by the President of the National Academy of Sciences. Appointments shall be made not later than 18 months after the date of enactment of the Clean Air Act Amendments of 1990.

(d) **ASSISTANCE FROM AGENCIES.**—The Administrator of the Environmental Protection Agency and the heads of all other departments, agencies, and instrumentalities of the executive branch of the Federal Government shall, to the maximum extent practicable, assist the Commission in gathering such information as the Commission deems necessary to carry out this section subject to other provisions of law.

(e) **STAFF AND CONTRACTS.**—

(1) In the conduct of the study required by this section, the Commission is authorized to contract (in accordance with Federal contract law) with nongovernmental entities that are competent to perform research or investigations within the Commission's mandate, and to hold public hearings, forums, and workshops to enable full public participation.

(2) The Commission may appoint and fix the pay of such staff as it deems necessary in accordance with the provisions of title 5, United States Code. The Commission may request the temporary assignment of personnel from the Environmental Protection Agency or other Federal agencies.

(3) The members of the Commission who are not officers or employees of the United States, while attending conferences or meetings of the Commission or while otherwise serving at the request of the Chair, shall be entitled to receive compensation at a rate not in excess of the maximum rate of pay for Grade GS-18, as provided in the General Schedule under section 5332 of title 5 of the United States Code, including travel time, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence as authorized by law for persons in the Government service employed intermittently.

(f) REPORT.—A report containing the results of all Commission studies and investigations under this section, together with any appropriate legislative recommendations or administrative recommendations, shall be made available to the public for comment not later than 42 months after the date of enactment of the Clean Air Act Amendments of 1990 and shall be submitted to the President and to the Congress not later than 48 months after such date of enactment. In the report, the Commission shall make recommendations with respect to the appropriate use of risk assessment and risk management in Federal regulatory programs to prevent cancer or other chronic health effects which may result from exposure to hazardous substances. The Commission shall cease to exist upon the date determined by the Commission, but not later than 9 months after the submission of such report.

(g) AUTHORIZATION.—There are authorized to be appropriated such sums as are necessary to carry out the activities of the Commission established by this section.

SEC. 304. CHEMICAL PROCESS SAFETY MANAGEMENT.

(a) CHEMICAL PROCESS SAFETY STANDARD.—The Secretary of Labor shall act under the Occupational Safety and Health Act of 1970 (29 U.S.C. 653) to prevent accidental releases of chemicals which could pose a threat to employees. Not later than 12 months after the date of enactment of the Clean Air Act Amendments of 1990, the Secretary of Labor, in coordination with the Administrator of the Environmental Protection Agency, shall promulgate, pursuant to the Occupational Safety and Health Act, a chemical process safety standard designed to protect employees from hazards associated with accidental releases of highly hazardous chemicals in the workplace.

(b) LIST OF HIGHLY HAZARDOUS CHEMICALS.—The Secretary shall include as part of such standard a list of highly hazardous chemicals, which include toxic, flammable, highly reactive and explosive substances. The list of such chemicals may include those chemicals listed by the Administrator under section 302 of the Emergency Planning and Community Right to Know Act of 1986. The Secretary may make additions to such list when a substance

is found to pose a threat of serious injury or fatality in the event of an accidental release in the workplace.

(c) ELEMENTS OF SAFETY STANDARD.—Such standard shall, at minimum, require employers to—

(1) develop and maintain written safety information identifying workplace chemical and process hazards, equipment used in the processes, and technology used in the processes;

(2) perform a workplace hazard assessment, including, as appropriate, identification of potential sources of accidental releases, an identification of any previous release within the facility which had a likely potential for catastrophic consequences in the workplace, estimation of workplace effects of a range of releases, estimation of the health and safety effects of such range on employees;

(3) consult with employees and their representatives on the development and conduct of hazard assessments and the development of chemical accident prevention plans and provide access to these and other records required under the standard;

(4) establish a system to respond to the workplace hazard assessment findings, which shall address prevention, mitigation, and emergency responses;

(5) periodically review the workplace hazard assessment and response system;

(6) develop and implement written operating procedures for the chemical process including procedures for each operating phase, operating limitations, and safety and health considerations;

(7) provide written safety and operating information to employees and train employees in operating procedures, emphasizing hazards and safe practices;

(8) ensure contractors and contract employees are provided appropriate information and training;

(9) train and educate employees and contractors in emergency response in a manner as comprehensive and effective as that required by the regulation promulgated pursuant to section 126(d) of the Superfund Amendments and Reauthorization Act;

(10) establish a quality assurance program to ensure that initial process related equipment, maintenance materials, and spare parts are fabricated and installed consistent with design specifications;

(11) establish maintenance systems for critical process related equipment including written procedures, employee training, appropriate inspections, and testing of such equipment to ensure ongoing mechanical integrity;

(12) conduct pre-start-up safety reviews of all newly installed or modified equipment;

(13) establish and implement written procedures to manage change to process chemicals, technology, equipment and facilities; and

(14) investigate every incident which results in or could have resulted in a major accident in the workplace, with any findings to be reviewed by operating personnel and modifications made if appropriate.

(d) STATE AUTHORITY.—Nothing in this section may be construed to diminish the authority of the States and political subdivisions thereof as described in section 112(r)(11) of the Clean Air Act.

* * * * *

SEC. 305. SOLID WASTE COMBUSTION.

* * * * *

(c) REVIEW OF ACID GAS SCRUBBING REQUIREMENTS.—Prior to the promulgation of any performance standard for solid waste incineration units combusting municipal waste under section 111 or section 129 of the Clean Air Act, the Administrator shall review the availability of acid gas scrubbers as a pollution control technology for small new units and for existing units (as defined in 54 Federal Register 52190 (December 20, 1989), taking into account the provisions of subsection (a)(2) of section 129 of the Clean Air Act.

SEC. 306. ASH MANAGEMENT AND DISPOSAL.

For a period of 2 years after the date of enactment of the Clean Air Act Amendments of 1990, ash from solid waste incineration units burning municipal waste shall not be regulated by the Administrator of the Environmental Protection Agency pursuant to section 3001 of the Solid Waste Disposal Act. Such reference and limitation shall not be construed to prejudice, endorse or otherwise affect any activity by the Administrator following the 2-year period from the date of enactment of the Clean Air Act Amendments of 1990.

* * * * *

SEC. 402. FOSSIL FUEL USE.

(a) CONTRACTS FOR HYDROELECTRIC ENERGY.—Any person who, after the date of the enactment of the Clean Air Act Amendments of 1990, enters into a contract under which such person receives hydroelectric energy in return for the provision of electric energy by such person shall use allowances held by such person as necessary to satisfy such person's obligations under such contract.

(b) FEDERAL POWER MARKETING ADMINISTRATION.—A Federal Power Marketing Administration shall not be subject to the provisions and requirements of this title with respect to electric energy generated by hydroelectric facilities and marketed by such Power Marketing Administration. Any person who sells or provides electric energy to a Federal Power Marketing Administration shall comply with the provisions and requirements of this title.

SEC. 403. REPEAL OF PERCENT REDUCTION.

(a)

(b) REVISED REGULATIONS.—Not later than three years after the date of enactment of the Clean Air Act Amendments of 1990, the Administrator shall promulgate revised regulations for standards of performance for new fossil fuel fired electric utility units commencing construction after the date on which such regulations are proposed that, at a minimum, require any source subject to such revised standards to emit sulfur dioxide at a rate not greater than would have resulted from compliance by such source with the

applicable standards of performance under this section prior to such revision.

(c) **APPLICABILITY.**—The provisions of subsections (a) and (b) apply only so long as the provisions of section 403(e) of the Clean Air Act remain in effect.

* * * * *

SEC. 404. ACID DEPOSITION STANDARDS.

Not later than 36 months after the date of enactment of this Act, the Administrator of the Environmental Protection Agency shall transmit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report on the feasibility and effectiveness of an acid deposition standard or standards to protect sensitive and critically sensitive aquatic and terrestrial resources. The study required by this section shall include, but not be limited to, consideration of the following matters:

(1) identification of the sensitive and critically sensitive aquatic and terrestrial resources in the United States and Canada which may be affected by the deposition of acidic compounds;

(2) description of the nature and numerical value of a deposition standard or standards that would be sufficient to protect such resources;

(3) description of the use of such standard or standards in other Nations or by any of the several States in acid deposition control programs;

(4) description of the measures that would need to be taken to integrate such standard or standards with the control program required by title IV of the Clean Air Act;

(5) description of the state of knowledge with respect to source-receptor relationships necessary to develop a control program on such standard or standards and the additional research that is on-going or would be needed to make such a control program feasible; and

(6) description of the impediments to implementation of such control program and the cost-effectiveness of deposition standards compared to other control strategies including ambient air quality standards, new source performance standards and the requirements of title IV of the Clean Air Act.

SEC. 405. NATIONAL ACID LAKES REGISTRY.

The Administrator of the Environmental Protection Agency shall create a National Acid Lakes Registry that shall list, to the extent practical, all lakes that are known to be acidified due to acid deposition, and shall publish such list within one year of the enactment of this Act. Lakes shall be added to the registry as they become acidic or as data becomes available to show they are acidic. Lakes shall be deleted from the registry as they become nonacidic.

SEC. 406. INDUSTRIAL SO EMISSIONS.

(a) **REPORT.**—Not later than January 1, 1995 and every 5 years thereafter, the Administrator of the Environmental Protection Agency shall transmit to the Congress a report containing an inventory of national annual sulfur dioxide emissions from industrial

sources (as defined in title IV of the Act), including units subject to section 405(g)(6) of the Clean Air Act, for all years for which data are available, as well as the likely trend in such emissions over the following twenty-year period. The reports shall also contain estimates of the actual emission reduction in each year resulting from promulgation of the diesel fuel desulfurization regulations under section 214.

(b) 5.60 MILLION TON CAP.—Whenever the inventory required by this section indicates that sulfur dioxide emissions from industrial sources, including units subject to section 405(g)(5)¹ of the Clean Air Act, may reasonably be expected to reach levels greater than 5.60 million tons per year, the Administrator of the Environmental Protection Agency shall take such actions under the Clean Air Act as may be appropriate to ensure that such emissions do not exceed 5.60 million tons per year. Such actions may include the promulgation of new and revised standards of performance for new sources, including units subject to section 405(g)(5)¹ of the Clean Air Act, under section 111(b) of the Clean Air Act, as well as promulgation of standards of performance for existing sources, including units subject to section 405(g)(5) of the Clean Air Act, under authority of this section. For an existing source regulated under this section, “standard of performance” means a standard which the Administrator determines is applicable to that source and which reflects the degree of emission reduction achievable through the application of the best system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated for that category of sources.

(c) ELECTION.—Regulations promulgated under section 405(b)² of the Clean Air Act shall not prohibit a source from electing to become an affected unit under section 410 of the Clean Air Act.

SEC. 407. SENSE OF THE CONGRESS ON EMISSION REDUCTIONS COSTS.

It is the sense of the Congress that the Clean Air Act Amendments of 1990, through the allowance program, allocates the costs of achieving the required reductions in emissions of sulfur dioxide and oxides of nitrogen among sources in the United States. Broad based taxes and emissions fees that would provide for payment of the costs of achieving required emissions reductions by any party or parties other than the sources required to achieve the reductions are undesirable.

SEC. 408. MONITOR ACID RAIN PROGRAM IN CANADA.

(a) REPORTS TO CONGRESS.—The Administrator of the Environmental Protection Agency, in consultation with the Secretary of State, the Secretary of Energy, and other persons the Administrator deems appropriate, shall prepare and submit a report to Congress on January 1, 1994, January 1, 1999, and January 1, 2005.

(b) CONTENTS.—The report to Congress shall analyze the current emission levels of sulfur dioxide and nitrogen oxides in each

¹ Probably intended to refer to section 405(g)(6).

² Probably intended to refer to section 403(b).

of the provinces participating in Canada's acid rain control program, the amount of emission reductions of sulfur dioxide and oxides of nitrogen achieved by each province, the methods utilized by each province in making those reductions, the costs to each province and the employment impacts in each province of making and maintaining those reductions.

(c) COMPLIANCE.—Beginning on January 1, 1999, the reports shall also assess the degree to which each province is complying with its stated emissions cap.

SEC. 409. REPORT ON CLEAN COAL TECHNOLOGIES EXPORT PROGRAMS.

The Secretary of Energy in consultation with the Secretary of Commerce shall provide a report to the Congress within one year of enactment of this legislation which will identify, inventory and analyze clean coal technologies export programs within United States Government agencies including the Departments of State, Commerce, and Energy and at the Export-Import Bank and the Overseas Private Investment Corporation. The study shall address the effectiveness of interagency coordination of export promotion and determine the feasibility of establishing an interagency commission for the purpose of promoting the export and use of clean coal technologies.

SEC. 410. ACID DEPOSITION RESEARCH BY THE UNITED STATES FISH AND WILDLIFE SERVICE.

There are authorized to be appropriated to the United States Fish and Wildlife Service of the Department of the Interior an amount equal to \$500,000 to fund research related to acid deposition and the monitoring of high altitude mountain lakes in the Wind River Reservation, Wyoming, to be conducted through the Management Assistance Office of the United States Fish and Wildlife Service located in Lander, Wyoming and the University of Wyoming.

SEC. 411. STUDY OF BUFFERING AND NEUTRALIZING AGENTS.

There are authorized to be appropriated to the United States Fish and Wildlife Service of the Department of the Interior an amount equal to \$250,000 to fund a study to be conducted in conjunction with the University of Wyoming of the effectiveness of various buffering and neutralizing agents used to restore lakes and streams damaged by acid deposition.

* * * * *

SEC. 413. SPECIAL CLEAN COAL TECHNOLOGY PROJECT.

(a) DEMONSTRATION PROJECT.—The Secretary of Energy shall, subject to appropriation, as part of the Secretary's activities with respect to fossil energy research and development under the Department of Energy Organization Act (Public Law 95-91) consider funding at least 50 percent of the cost of a demonstration project to design, construct, and test a technology system for a cyclone boiler that will serve as a model for sulfur dioxide and nitrogen oxide reduction technology at a combustion unit required to meet the emissions reductions prescribed in this bill. The Secretary shall expedite approval and funding to enable such project to be completed no later than January 1, 1995.

The unit selected for this project shall be in a utility plant that (1) is among the top 10 emitters of sulfur dioxide as identified on Table A of section 404; (2) has 3 or more units, 2 of which are cyclone boiler units; and (3) has no existing scrubbers.

(b) AUTHORIZATION.—There are authorized to be appropriated such sums as may be necessary to carry out this section, to remain available until expended.

* * * * *

SEC. 603. METHANE STUDIES.

(a) ECONOMICALLY JUSTIFIED ACTIONS.—Not later than 2 years after enactment of this Act, the Administrator shall prepare and submit a report to the Congress that identifies activities, substances, processes, or combinations thereof that could reduce methane emissions and that are economically and technologically justified with and without consideration of environmental benefit.

(b) DOMESTIC METHANE SOURCE INVENTORY AND CONTROL.—Not later than 2 years after the enactment of this Act, the Administrator, in consultation and coordination with the Secretary of Energy and the Secretary of Agriculture, shall prepare and submit to the Congress reports on each of the following:

(1) Methane emissions associated with natural gas extraction, transportation, distribution, storage, and use. Such report shall include an inventory of methane emissions associated with such activities within the United States. Such emissions include, but are not limited to, accidental and intentional releases from natural gas and oil wells, pipelines, processing facilities, and gas burners. The report shall also include an inventory of methane generation with such activities.

(2) Methane emissions associated with coal extraction, transportation, distribution, storage, and use. Such report shall include an inventory of methane emissions associated with such activities within the United States. Such emissions include, but are not limited to, accidental and intentional releases from mining shafts, degasification wells, gas recovery wells and equipment, and from the processing and use of coal. The report shall also include an inventory of methane generation with such activities.

(3) Methane emissions associated with management of solid waste. Such report shall include an inventory of methane emissions associated with all forms of waste management in the United States, including storage, treatment, and disposal.

(4) Methane emissions associated with agriculture. Such report shall include an inventory of methane emissions associated with rice and livestock production in the United States.

(5) Methane emissions associated with biomass burning. Such report shall include an inventory of methane emissions associated with the intentional burning of agricultural wastes, wood, grasslands, and forests.

(6) Other methane emissions associated with human activities. Such report shall identify and inventory other domestic sources of methane emissions that are deemed by the Administrator and other such agencies to be significant.

(c) INTERNATIONAL STUDIES.—

(1) METHANE EMISSIONS.—Not later than 2 years after the enactment of this Act, the Administrator shall prepare and submit to the Congress a report on methane emissions from countries other than the United States. Such report shall include inventories of methane emissions associated with the activities listed in subsection (b).

(2) PREVENTING INCREASES IN METHANE CONCENTRATIONS.—Not later than 2 years after the enactment of this Act, the Administrator shall prepare and submit to the Congress a report that analyzes the potential for preventing an increase in atmospheric concentrations of methane from activities and sources in other countries. Such report shall identify and evaluate the technical options for reducing methane emission from each of the activities listed in subsection (b), as well as other activities or sources that are deemed by the Administrator in consultation with other relevant Federal agencies and departments to be significant and shall include an evaluation of costs. The report shall identify the emissions reductions that would need to be achieved to prevent increasing atmospheric concentrations of methane. The report shall also identify technology transfer programs that could promote methane emissions reductions in lesser developed countries.

(d) NATURAL SOURCES.—Not later than 2 years after the enactment of this Act, the Administrator shall prepare and submit to the Congress a report on—

(1) methane emissions from biogenic sources such as (A) tropical, temperate, and subarctic forests, (B) tundra, and (C) freshwater and saltwater wetlands; and

(2) the changes in methane emissions from biogenic sources that may occur as a result of potential increases in temperatures and atmospheric concentrations of carbon dioxide.

(e) STUDY OF MEASURES TO LIMIT GROWTH IN METHANE CONCENTRATIONS.—Not later than 2 years after the completion of the studies in subsections (b), (c), and (d), the Administrator shall prepare and submit to the Congress a report that presents options outlining measures that could be implemented to stop or reduce the growth in atmospheric concentrations of methane from sources within the United States referred to in paragraphs (1) through (6) of subsection (b). This study shall identify and evaluate the technical options for reducing methane emissions from each of the activities listed in subsection (b), as well as other activities or sources deemed by such agencies to be significant, and shall include an evaluation of costs, technology, safety, energy, and other factors. The study shall be based on the other studies under this section. The study shall also identify programs of the United States and international lending agencies that could be used to induce lesser developed countries to undertake measures that will reduce methane emissions and the resource needs of such programs.

(f) INFORMATION GATHERING.—In carrying out the studies under this section, the provisions and requirements of section 114 of the Clean Air Act shall be available for purposes of obtaining information to carry out such studies.

(g) CONSULTATION AND COORDINATION.—In preparing the studies under this section the Administrator shall consult and coordinate with the Secretary of Energy, the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, and the heads of other relevant Federal agencies and departments. In the case of the studies under subsections (a), (b), and (e), such consultation and coordination shall include the Secretary of Agriculture.

* * * * *

SEC. 711. SAVINGS PROVISIONS AND EFFECTIVE DATES.

(a) SAVINGS PROVISIONS.—Except as otherwise expressly provided in this Act, no suit, action, or other proceeding lawfully commenced by the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under the Clean Air Act, as in effect immediately prior to the date of enactment of this Act, shall abate by reason of the taking effect of the amendments made by this Act.

(b) EFFECTIVE DATES.—(1) Except as otherwise expressly provided, the amendments made by this Act shall be effective on the date of enactment of this Act.

(2) The Administrator's authority to assess civil penalties under section 205(c) of the Clean Air Act, as amended by this Act, shall apply to violations that occur or continue on or after the date of enactment of this Act. Civil penalties for violations that occur prior to such date and do not continue after such date shall be assessed in accordance with the provisions of the Clean Air Act in effect immediately prior to the date of enactment of this Act.

(3) The civil penalties prescribed under sections 205(a) and 211(d)(1) of the Clean Air Act, as amended by this Act, shall apply to violations that occur on or after the date of enactment of this Act. Violations that occur prior to such date shall be subject to the civil penalty provisions prescribed in sections 205(a) and 211(d) of the Clean Air Act in effect immediately prior to the enactment of this Act. The injunctive authority prescribed under section 211(d)(2) of the Clean Air Act, as amended by this Act, shall apply to violations that occur or continue on or after the date of enactment of this Act.

(4) For purposes of paragraphs (2) and (3), where the date of a violation cannot be determined it will be assumed to be the date on which the violation is discovered.

* * * * *

SEC. 807. HYDROGEN FUEL CELL VEHICLE STUDY AND TEST PROGRAM.

The Administrator of the Environmental Protection Agency, in conjunction with the National Aeronautics and Space Administration and the Department of Energy, shall conduct a study and test program on the development of a hydrogen fuel cell electric vehicle. The study and test program shall determine how best to transfer existing NASA hydrogen fuel cell technology into the form of a mass-producible, cost effective hydrogen fuel cell vehicle. Such study and test program shall include at a minimum a feasibility-design study, the construction of a prototype, and a demonstration.

This study and test program should be completed and a report submitted to Congress within 3 years after the enactment of the Clean Air Act Amendments of 1990. This study and test program should be performed in the university or universities which are best exhibiting the facilities and expertise to develop such a fuel cell vehicle.

SEC. 808. RENEWABLE ENERGY AND ENERGY CONSERVATION INCENTIVES.

(a) DEFINITION.—For purposes of this section, “renewable energy” means energy from photovoltaic, solar thermal, wind, geothermal, and biomass energy production technologies.

(b) RATE INCENTIVES STUDY.—Within 18 months after enactment, the Federal Energy Regulatory Commission, in consultation with the Environmental Protection Agency, shall complete a study which calculates the net environmental benefits of renewable energy, compared to nonrenewable energy, and assigns numerical values to them. The study shall include, but not be limited to, environmental impacts on air, water, land use, water use, human health, and waste disposal.

(c) MODEL REGULATIONS.—In conjunction with the study in subsection (b), the Commission shall propose one or more models for incorporating the net environmental benefits into the regulatory treatment of renewable energy in order to provide economic compensation for those benefits.

(d) REPORT.—The Commission shall transmit the study and the model regulations to Congress, along with any recommendations on the best ways to reward renewable energy technologies for their environmental benefits, in a report no later than 24 months after enactment.

SEC. 809. CLEAN AIR STUDY OF SOUTHWESTERN NEW MEXICO.

The Administrator shall conduct a study of the causes of degraded visibility in southwestern New Mexico. The Administrator, in consultation with the Secretary of State, is encouraged to cooperate with the Government of Mexico, other Federal agencies, and any other appropriate organizations in conducting the study. Nothing in this section shall be construed as contravening or superseding the provisions of any international agreement in force for the United States as of the date of enactment of this section, or any relevant Federal statute.

SEC. 810. IMPACT ON SMALL COMMUNITIES.

Before implementing a provision of this Act, the Administrator of the Environmental Protection Agency shall consult with the Small Communities Coordinator of the Environmental Protection Agency to determine the impact of such provision on small communities, including the estimated cost of compliance with such provision.

SEC. 811. EQUIVALENT AIR QUALITY CONTROLS AMONG TRADING NATIONS.

(a) FINDINGS.—The Congress finds that—

(1) all nations have the responsibility to adopt and enforce effective air quality standards and requirements and the United States, in enacting this Act, is carrying out its responsibility in this regard;

(2) as a result of complying with this Act, businesses in the United States will make significant capital investments and incur incremental costs in implementing control technology standards;

(3) such compliance may impair the competitiveness of certain United States jobs, production, processes, and products if foreign goods are produced under less costly environmental standards and requirements than are United States goods; and

(4) mechanisms should be sought through which the United States and its trading partners can agree to eliminate or reduce competitive disadvantages.

(b) ACTION BY THE PRESIDENT.—

(1) IN GENERAL.—Within 18 months after the date of the enactment of the Clean Air Act Amendments of 1990, the President shall submit to the Congress a report—

(A) identifying and evaluating the economic effects of—

(i) the significant air quality standards and controls required under this Act, and

(ii) the differences between the significant standards and controls required under this Act and similar standards and controls adopted and enforced by the major trading partners of the United States,

on the international competitiveness of United States manufacturers; and

(B) containing a strategy for addressing such economic effects through trade consultations and negotiations.

(2) ADDITIONAL REPORTING REQUIREMENTS.—(A) The evaluation required under paragraph (1)(A) shall examine the extent to which the significant air quality standards and controls required under this Act are comparable to existing internationally-agreed norms.

(B) The strategy required to be developed under paragraph (1)(B) shall include recommended options (such as the harmonization of standards and trade adjustment measures) for reducing or eliminating competitive disadvantages caused by differences in standards and controls between the United States and each of its major trading partners.

(3) PUBLIC COMMENT.—Interested parties shall be given an opportunity to submit comments regarding the evaluations and strategy required in the report under paragraph (1). The President shall take any such comment into account in preparing the report.

(4) INTERIM REPORT.—Within 9 months after the date of the enactment of the Clean Air Act Amendments of 1990, the President shall submit to the Congress an interim report on the progress being made in complying with paragraph (1).

* * * * *

SEC. 813. COMBUSTION OF CONTAMINATED USED OIL IN SHIPS.

Within 2 years after the enactment of the Clean Air Act Amendments of 1990, the Administrator of the Environmental Protection Agency shall complete a study and submit a report to Congress evaluating the health and environmental impacts of the com-

bustion of contaminated used oil in ships, the reasons for using such oil for such purposes, the alternatives to such use, the costs of such alternatives, and other relevant factors and impacts. In preparing such study, the Administrator shall obtain the view and comments of all interested persons and shall consult with the Secretary of Transportation and the Secretary of the department in which the Coast Guard is operating.

SEC. 814. AMERICAN MADE PRODUCTS.

It is the sense of the Congress that—

(1) existing equipment and machinery retrofitted to comply with the Clean Air Act's "Best Available Control Technology" language and all other specifications within the Act be produced in the United States and purchased from American manufacturers.

(2) The construction of new industrial and utility facilities comply to the Act's specifications through the incorporation of American made equipment and technology.

(3) Individuals, groups, and organizations in the public sector strive to purchase and produce American made products that improve our nation's air quality.

SEC. 815. ESTABLISHMENT OF PROGRAM TO MONITOR AND IMPROVE AIR QUALITY IN REGIONS ALONG THE BORDER BETWEEN THE UNITED STATES AND MEXICO.

(a) **IN GENERAL.**—The Administrator of the Environmental Protection Agency (hereinafter referred to as the "Administrator") is authorized, in cooperation with the Department of State and the affected States, to negotiate with representatives of Mexico to authorize a program to monitor and improve air quality in regions along the border between the United States and Mexico. The program established under this section shall not extend beyond July 1, 1995.

(b) **MONITORING AND REMEDIATION.**—

(1) **MONITORING.**—The monitoring component of the program conducted under this section shall identify and determine sources of pollutants for which national ambient air quality standards (hereinafter referred to as "NAAQS") and other air quality goals have been established in regions along the border between the United States and Mexico. Any such monitoring component of the program shall include, but not be limited to, the collection of meteorological data, the measurement of air quality, the compilation of an emissions inventory, and shall be sufficient to the extent necessary to successfully support the use of a state-of-the-art mathematical air modeling analysis. Any such monitoring component of the program shall collect and produce data projecting the level of emission reductions necessary in both Mexico and the United States to bring about attainment of both primary and secondary NAAQS, and other air quality goals, in regions along the border in the United States. Any such monitoring component of the program shall include to the extent possible, data from monitoring programs undertaken by other parties.

(2) **REMEDIATION.**—The Administrator is authorized to negotiate with appropriate representatives of Mexico to develop

joint remediation measures to reduce the level of airborne pollutants to achieve and maintain primary and secondary NAAQS, and other air quality goals, in regions along the border between the United States and Mexico. Such joint remediation measures may include, but not be limited to measures included in the Environmental Protection Agency's Control Techniques and Control Technology documents. Any such remediation program shall also identify those control measures implementation of which in Mexico would be expedited by the use of material and financial assistance of the United States.

(c) ANNUAL REPORTS.—The Administrator shall, each year the program authorized in this section is in operation, report to Congress on the progress of the program in bringing nonattainment areas along the border of the United States into attainment with primary and secondary NAAQS. The report issued by the Administrator under this paragraph shall include recommendations on funding mechanisms to assist in implementation of monitoring and remediation efforts.

(d) FUNDING AND PERSONNEL.—The Administrator may, where appropriate, make available, subject to the appropriations, such funds, personnel, and equipment as may be necessary to implement the provisions of this section. In those cases where direct financial assistance of the United States is provided to implement monitoring and remediation programs in Mexico, the Administrator shall develop grant agreements with appropriate representatives of Mexico to assure the accuracy and completeness of monitoring data and the performance of remediation measures which are financed by the United States. With respect to any control measures within Mexico funded by the United States, the Administrator shall, to the maximum extent practicable, utilize resources of Mexico where such utilization would reduce costs to the United States. Such funding agreements shall include authorization for the Administrator to—

- (1) review and agree to plans for monitoring and remediation;
- (2) inspect premises, equipment and records to insure compliance with the agreements established under and the purposes set forth in this section; and
- (3) where necessary, develop grant agreements with affected States to carry out the provisions of this section.

* * * * *

SEC. 817. ROLE OF SECONDARY STANDARDS

(a) REPORT.—The Administrator shall request the National Academy of Sciences to prepare a report to the Congress on the role of national secondary ambient air quality standards in protecting welfare and the environment. The report shall:

- (1) include information on the effects on welfare and the environment which are caused by ambient concentrations of pollutants listed pursuant to section 108 and other pollutants which may be listed;
- (2) estimate welfare and environmental costs incurred as a result of such effects;

(3) examine the role of secondary standards and the State implementation planning process in preventing such effects;

(4) determine ambient concentrations of each such pollutant which would be adequate to protect welfare and the environment from such effects;

(5) estimate the costs and other impacts of meeting secondary standards; and

(6) consider other means consistent with the goals and objectives of the Clean Air Act which may be more effective than secondary standards in preventing or mitigating such effects.

(b) SUBMISSION TO CONGRESS; COMMENTS; AUTHORIZATION.—

(1) The report shall be transmitted to the Congress not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990.

(2) At least 90 days before issuing a report the Administrator shall provide an opportunity for public comment on the proposed report. The Administrator shall include in the final report a summary of the comments received on the proposed report.

(3) There are authorized to be appropriated such sums as are necessary to carry out this section.

* * * * *

SEC. 819. EXEMPTIONS FOR STRIPPER WELLS.

Notwithstanding any other provision of law, the amendments to the Clean Air Act made by section 103 of the Clean Air Act Amendments of 1990 (relating to additional provisions for ozone nonattainment areas), by section 104 of such amendments (relating to additional provisions for carbon monoxide nonattainment areas), by section 105 of such amendments (relating to additional provisions for PM-10 nonattainment areas), and by section 106 of such amendments (relating to additional provisions for areas designated as nonattainment for sulfur oxides, nitrogen dioxide, and lead) shall not apply with respect to the production of and equipment used in the exploration, production, development, storage or processing of—

(1) oil from a stripper well property, within the meaning of the June 1979 energy regulations (within the meaning of section 4996(b)(7) of the Internal Revenue Code of 1986, as in effect before the repeal of such section); and

(2) stripper well natural gas, as defined in section 108(b) of the Natural Gas Policy Act of 1978 (15 U.S.C. 3318(b)), except to the extent that provisions of such amendments cover areas designated as Serious pursuant to part D of title I of the Clean Air Act and having a population of 350,000 or more, or areas designated as Severe or Extreme pursuant to such part D.

SEC. 820. EPA REPORT ON MAGNETIC LEVITATION.

The Administrator of the Environmental Protection Agency shall, not later than 6 months after the date of enactment of this Act, submit to the Congress and the President a report of the Administrator's activities under any agreement with the Department of Transportation entered into prior to such date of enactment providing for an analysis of the health and environmental aspects of magnetic levitation technology.

SEC. 821. INFORMATION GATHERING ON GREENHOUSE GASES CONTRIBUTING TO GLOBAL CLIMATE CHANGE.

(a) **MONITORING.**—The Administrator of the Environmental Protection Agency shall promulgate regulations within 18 months after the enactment of the Clean Air Act Amendments of 1990 to require that all affected sources subject to title V¹ of the Clean Air Act shall also monitor carbon dioxide emissions according to the same timetable as in section 511¹ (b) and (c). The regulations shall require that such data be reported to the Administrator. The provisions of section 511¹(e) of title V¹ of the Clean Air Act shall apply for purposes of this section in the same manner and to the same extent as such provision applies to the monitoring and data referred to in section 511.¹

(b) **PUBLIC AVAILABILITY OF CARBON DIOXIDE INFORMATION.**—For each unit required to monitor and provide carbon dioxide data under subsection (a), the Administrator shall compute the unit's aggregate annual total carbon dioxide emissions, incorporate such data into a computer data base, and make such aggregate annual data available to the public.

* * * * *

SEC. 901. CLEAN AIR RESEARCH.

(a)

* * * * *

(e) **ASSESSMENT OF INTERNATIONAL AIR POLLUTION CONTROL TECHNOLOGIES.**—The Administrator of the Environmental Protection Agency shall conduct a study that compares international air pollution control technologies of selected industrialized countries to determine if there exist air pollution control technologies in countries outside the United States that may have beneficial applications to this Nation's air pollution control efforts. With respect to each country studied, the study shall include the topics of urban air quality, motor vehicle emissions, toxic air emissions, and acid deposition. The Administrator shall, within 2 years after the date of enactment of this Act, submit to the Congress a report detailing the results of such study.

(f) **ADIRONDACK EFFECTS ASSESSMENT.**—The Administrator of the Environmental Protection Agency shall establish a program to research the effects of acid deposition on waters where acid deposition has been most acute. The Administrator shall enter into a multi-year contract for such purposes with an independent university which has a year-round field analytical laboratory on a body of water of not less than 25,000 acres nor greater than 75,000 acres, which lies within a geographic region designated as a Biosphere Reserve by the Department of State. The facility must have demonstrated the capability to analyze relevant data on said body of water over a period of 20 years as well as extensive ecosystem modeling capabilities. There are authorized to be appropriated to carry out this subsection not less than \$6,000,000.

(g) **WESTERN STATES ACID DEPOSITION RESEARCH.**—(1) The Administrator of the Environmental Protection Agency shall sponsor

¹References to section 511 probably intended to refer to section 412. References to title V probably intended to refer to title IV, relating to acid deposition.

monitoring and research and submit to Congress annual and periodic assessment reports on—

(A) the occurrence and effects of acid deposition on surface waters located in that part of the United States west of the Mississippi River;

(B) the occurrence and effects of acid deposition on high elevation ecosystems (including forests,¹ and surface waters); and

(C) the occurrence and effects of episodic acidification, particularly with respect to high elevation watersheds.

(2) The Administrator of the Environmental Protection Agency shall analyze data generated from the studies conducted under paragraph (1), data from the Western Lakes Survey, and other appropriate research and utilize predictive modeling techniques that take into account the unique geographic, climatological, and atmospheric conditions which exist in the western United States to determine the potential occurrence and effects of acid deposition due to any projected increases in the emission of sulfur dioxide and nitrogen oxides in that part of the United States located west of the Mississippi River. The Administrator shall include the results of the project conducted under this paragraph in the reports issued to Congress under paragraph (1).

(h)(1) In carrying out the provisions of section 103(f) of the Clean Air Act, the Secretary of Energy is authorized to enter into contracts and cooperative agreements with, and make grants to, nonprofit entities affiliated with the University of Nevada and the University of Wyoming.

(2) Agreements, contracts, and grants described in paragraph (1) shall provide that such nonprofit entities—

(A) may provide basic technical and management personnel; and

(B) shall make available permanent research support facilities owned by the nonprofit entities.

(3) The nonprofit entities described in paragraphs (1) and (2) shall be authorized to make grants, accept contributions, and enter into agreements with other entities to carry out the provisions of this subsection.

(4) There are authorized to be appropriated to the Department of Energy \$3,000,000 for fiscal year 1991 and such sums as may be necessary for each fiscal year thereafter to carry out the provisions of paragraph (1). Such amounts shall remain available until expended.

TITLE X—DISADVANTAGED BUSINESS CONCERNS

Sec. 1001. Disadvantaged business concerns.

Sec. 1002. Use of quotas prohibited.

¹The comma after “forests” should have been omitted.

SEC. 1001. DISADVANTAGED BUSINESS CONCERNS.

(a) **IN GENERAL.**—In providing for any research relating to the requirements of the amendments made by the Clean Air Act Amendments of 1990 which uses funds of the Environmental Protection Agency, the Administrator of the Environmental Protection Agency shall, to the extent practicable, require that not less than 10 percent of total Federal funding for such research will be made available to disadvantaged business concerns.

(b) **DEFINITION.**—

(1)(A) For purposes of subsection (a), the term “disadvantaged business concern” means a concern—

(i) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals or, in the case of a publicly traded company, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individuals; and

(ii) the management and daily business operations of which are controlled by such individuals.

(B)(i) A for-profit business concern is presumed to be a disadvantaged business concern for purposes of subsection (a) if it is at least 51 percent owned by, or in the case of a concern which is a publicly traded company at least 51 percent of the stock of the company is owned by, one or more individuals who are members of the following groups:

- (I) Black Americans.
- (II) Hispanic Americans.
- (III) Native Americans.
- (IV) Asian Americans.
- (V) Women.
- (VI) Disabled Americans.

(ii) The presumption established by clause (i) may be rebutted with respect to a particular business concern if it is reasonably established that the individual or individuals referred to in that clause with respect to that business concern are not experiencing impediments to establishing or developing such concern as a result of the individual’s identification as a member of a group specified in that clause.

(C) The following institutions are presumed to be disadvantaged business concerns for purposes of subsection (a):

(i) Historically black colleges and universities, and colleges and universities having a student body in which 40 percent of the students are Hispanic.

(ii) Minority institutions (as that term is defined by the Secretary of Education pursuant to the General Education Provision Act (20 U.S.C. 1221 et seq.)).

(iii) Private and voluntary organizations controlled by individuals who are socially and economically disadvantaged.

(D) A joint venture may be considered to be a disadvantaged business concern under subsection (a), notwithstanding the size of such joint venture, if—

(i) a party to the joint venture is a disadvantaged business concern; and

(ii) that party owns at least 51 percent of the joint venture.

A person who is not an economically disadvantaged individual or a disadvantaged business concern, as a party to a joint venture, may not be a party to more than 2 awarded contracts in a fiscal year solely by reason of this subparagraph.

(E) Nothing in this paragraph shall prohibit any member of a racial or ethnic group that is not listed in subparagraph (B)(i) from establishing that they have been impeded in establishing or developing a business concern as a result of racial or ethnic discrimination.

SEC. 1002. USE OF QUOTAS PROHIBITED.—Nothing in this title shall permit or require the use of quotas or a requirement that has the effect of a quota in determining eligibility under section 1001.